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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Hawley-Nelson et al.

: Group Art Unit: 1643

Serial No. 09/911,569

: Examiner: Not assigned

Filed: July 23, 2001

For: PEPTIDE-ENHANCED TRANSFECTIONS

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Washington, D.C. 20231

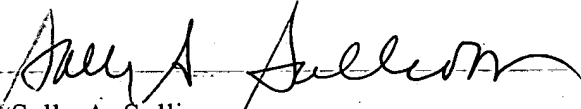
Sir:

The Examiner is respectfully requested to consider the Information Disclosure Statements submitted by Applicants in U.S. serial number 09/039,780 filed March 16, 1998, from which the above-referenced application takes priority under 35 U.S.C. §120. Further, Applicants respectfully direct the Examiner's attention to any other items cited by the Examiner during the prosecution of the patent application serial number 09/039,780. It is believed unnecessary under 37 C.F.R. §1.98(a) to submit copies of these previously submitted or cited items which are listed on the enclosed Form 1449.

This information is cited in a spirit of forthrightness and cooperation to enable the applicants to obtain that measure of protection for the invention to which there is entitlement. However, no representation is made that the listed art actually qualifies as prior art under the patent statute and the mere use of PTO-1449 is not an admission that all listed references are prior art. No representation is made that applicants know of the best art.

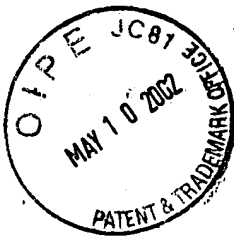
It is believed that this submission does not require the payment of a fee. If this is not correct, please charge any required fee to deposit account no. 07-1969.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Sally A. Sullivan", is written over a horizontal line.

Sally A. Sullivan  
Reg. No. 32,064

GREENLEE, WINNER AND SULLIVAN, P.C.  
5370 Manhattan Circle, Suite 201, Boulder, CO 80303  
Telephone: (303) 499-8080; Facsimile: (303) 499-8089  
Attorney Docket No. 32-95D  
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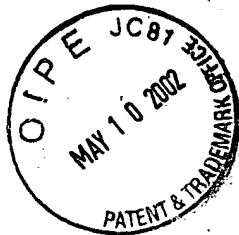
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APPLICANT Hawley-Nelson et al.		GROUP 1643

U.S. PATENT DOCUMENTS

Exmr. Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	5,795,587	08/18/98	Gao et al.	424	450	
	4,946,787	08/07/90	Eppstein et al.			
	5,736,392	04/07/98	Hawley-Nelson et al.			
	5,714,166	02/03/98	Tomalia et al.			
	5,166,320	11/24/92	Wu et al.	530	395	
	5,354,844	10/11/94	Beug et al.	530	345	
	5,574,142	11/12/96	Meyer, Jr. et al.	536	23.1	
	5,589,392	12/31/96	Short	435	320.1	
	5,266,106	11/30/93	Winnik et al.	106	22K	
	5,338,532	08/16/94	Tomalia et al.	424	1.49	
	5,527,524	06/18/96	Tomalia et al.	424	1.33	
	5,578,475	11/26/96	Jessee	435	172.3	
	5,587,441	12/24/96	Frechet et al.	526	238	
	5,587,446	12/24/96	Frechet et al.	526	3.33	
	5,560,929	10/01/96	Hedstrand et al.	424	486	
	5,334,761	08/02/94	Gebeyehu et al.	564	197	
	5,674,908	10/07/97	Haces et al.	514	642	
	5,532,142	07/02/96	Johnston et al.	435	69	
	5,198,423	03/30/93	Taguchi et al.	514	12	
	4,897,355	01/30/90	Eppstein et al.	435	240.2	

FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation Yes/No
1	WO 91/15501	17.10.91	PCT	C07H 21/02	C12N 5/00	
2	WOA91/16024	31.10.91	PCT			



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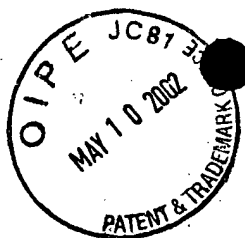
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Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
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	3	WO92/13570	20.08.92	PCT			No
	4	WO93/07282	04.15.93	PCT			
	5	WO93/07283	04.15.93	PCT			
	6	WO93/19768	14.10.93	PCT			
	7	WO94/04696	03.03.94	PCT			
	8	WO94/23751	27.10.94	PCT			No
	9	WO95/02397	26.01.95	PCT			
	10	WO95/17373	29.06.95	PCT			
	11	WO95/24221	14.09.95	PCT			
	12	WO95/31557	23.11.95	PCT			
	13	WO96/01841	25.01.96	PCT			
	14	WO96/05218	22.02.96	PCT			
	15	WO96/10038	04.04.96	PCT			
	16	WO96/22321	25.07.96	PCT			
	17	WO96/22765	01.08.96	PCT			
	18	WO96/31549	10.10.96	PCT			No
	19	0 304 111 B1	30.07.88	EP			No
	20	0 359 347	21.03.90	EP			
	21	0 544 292	26.11.92	EP			
	22	AU-B-26526/92	28.09.92	AU			

OTHER PRIOR ART (including Author, Title, Date, Pertinent Pages, etc.)

	23	Aumailley, M. et al. (1989), "Cell Attachment Properties of Collagen Type VI and Arg-Gly-Asp Dependent Binding to its $\alpha 2(VI)$ and $\alpha 3(VI)$ Chains," Exp. Cell Res. 181:463-474.
	24	Behr, J-P. et al. (1989), "Efficient gene transfer into mammalian primary endocrine cells with lipopolyamine-coated DNA," Proc. Natl. Acad. Sci. USA 86:6982-6986
	25	Bielinska, A. et al. (1996), "Regulation of <i>in vivo</i> gene expression using antisense oligonucleotides or antisense expression plasmids transfected using starburst PAMAM dendrimers," Nucl. Acids Res. 24(11):2176-2182

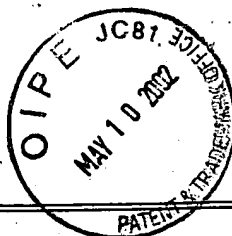


Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

	26	Bonifaci, N. et al. (1995), "Nuclear translocation of an exogenous fusion protein containing HIV Tat requires unfolding," AIDS 9(9):995-1000
	27	Braunlin et al., "Equilibrium dialysis studies of polyamine binding to DNA," Biopolymers 21:1301-1314
	28	Carrasco, L. et al. (1982), "Modification of Membrane Permeability in Vaccinia Virus-Infected Cells," J. Virol. 117:62-69.
	29	Ciccarone et al. (1993), "Cationic Liposome-Mediated Transfection of Eukaryotic Cells: High Efficiency Nucleic Acid Delivery with Lipofectin, Lipofectace™, and Lipofectamine™ Reagents," FASEB J., Abstracts, 7(7):A1131, Abstract No. 454
	30	Ciccarone et al., "DMRIE-C reagent for transfection of suspension cells and for RNA transfections," Focus 17:84-87
	31	Cotton et al. (1992), "High-efficiency receptor-mediated delivery of small and large 48 kilobase gene constructs using the endosome-disruption activity of defective or chemically inactivated adenovirus particles," Proc. Natl. Acad. Sci. USA 89:6094-6098
	32	Curiel, D.T. et al. (1992), "High-Efficiency Gene Transfer Mediated by Adenovirus Coupled to DNA-Polylysine Complexes," Hum. Gene Therapy 3:147-154
	33	Curiel, D.T. et al. (1991), "Adenovirus enhancement of transferrin-polylysine-mediated gene delivery," Proc. Natl. Acad. Sci. USA 88:8850-8854
	34	Dayhoff, M.O. et al. (1978), "Model of Evolutionary Change in Proteins," in Atlas of Protein Sequence and Structure, Vol. 5, Supp. 3, Chapter 22, pp. 345-352
	35	Dedhar, S. et al. (1987), "A Cell Surface Receptor Complex for Collagen Type I Recognizes the Arg-Gly-Asp Sequence," J. Cell Biol. 104:585-593.
	36	DeRobertis et al. (1978), "Intracellular migration of nuclear proteins in Xenopus oocytes," Nature 272:254-256
	37	Dingwall, C. and Laskey, R.A. (1991), "Nuclear targeting sequences - a consensus?" TIBS 16:478-481
	38	Epand et al. (1992), "Peptide models for the membrane destabilizing actions of viral fusion proteins," Biopolymers 32:309-314
	39	Eytan, G.D. (1982), "Use of Liposomes for Reconstitution of Biological Functions," Biochem. Biophys. Acta 694:185-202

MAY 15 2002

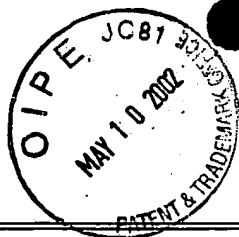
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Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

	40	Fawell, S. et al. (1994), "Tat-mediated delivery of heterologous proteins into cells," Proc. Natl. Acad. Sci. USA <u>91</u> :664-668
	41	Felgner, P.L. and Ringold, G.M. (1989), "Cationic liposome-mediated transfection," Nature <u>337</u> :387-388
	42	Felgner, P.L. et al. (1987), "Lipofection: A highly efficient, lipid-mediated DNA-transfection procedure," Proc. Natl. Acad. Sci. USA <u>84</u> :7413-7417
	43	FitzGerald, D.J.P. et al. (1983), "Adenovirus-Induced Release of Epidermal Growth Factor and Pseudomonas Toxin into the Cytosol of KB Cells during Receptor-Mediated Endocytosis," Cell <u>32</u> :607-617
	44	Frankel, A.D. et al. (1989), "Activity of synthetic peptides from the Tat protein of human immunodeficiency virus type 1," Proc. Natl. Acad. Sci. USA <u>86</u> :7397-7401
	45	Friedlander, D.R. et al. (1988), "Functional Mapping of Cytotactin: Proteolytic Fragments Active in Cell-Substrate Adhesion," J. Cell Biol. <u>107</u> :2329-2340.
	46	Gao, X. and Huang, L. (1996), "Potentiation of Cationic Liposome-Mediated Gene Delivery by Polycations," Biochemistry <u>35</u> :1027-1036
	47	Gardner, J.M. and Hynes, R.O. (1985), "Interaction of Fibronectin with Its Receptor on Platelets," Cell <u>42</u> :439-448.
	48	Gould-Fogerite, S. et al. (1989), "Chimerasome-mediated gene transfer in vitro and in vivo," Gene <u>84</u> :429-438
	49	Grant, D.S. et al. (1989), "Two Different Laminin Domains Mediate the Differentiation of Human Endothelial Cells into Capillary-like Structures In Vitro," Cell <u>58</u> :933-943.
	50	Haensler, J. and Szoka, R. (1993), "Polyamidoamine Cascade Polymers Mediate Efficient Transfection of Cells in Culture," Bioconjugate Chem. <u>4</u> :372-379
	51	Hagstrom, J.E. et al. (1996), "Complexes of non-cationic liposomes and histone H1 mediate efficient transfection of DNA without encapsulation," Biochim. Biophys. Acta <u>1284</u> :47-55
	52	Haverstick, D.M. et al. (1986), "Inhibition of Platelet Adhesion to Fibronectin, Fibrinogen, and von Willebrand Factor Substrates by a Synthetic Tetrapeptide Derived From the Cell-Binding Domain of Fibronectin," Blood <u>86</u> (4):946-952.
	53	Hawley-Nelson, P. et al. (1993) FOCUS Vol. 15, 17pp
	54	Humphries, M.J. et al. (1986), "Identification of an Alternatively Spliced Site in Human Plasma Fibronectin That Mediates Cell Type-specific Adhesion," J. Cell Biol. <u>103</u> :2637-2647.



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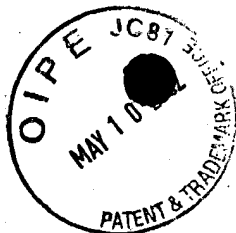
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Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

56	Humphries, M.J. et al. (1987), "Identification of Two Distinct Regions of the Type III Connecting Segment of Human Plasma Fibronectin That Promote Cell Type-specific Adhesion," J. Biol. Chem. <u>262</u> (14):6886-6892.
57	Ito, A. et al. (1990), "Synthetic Cationic Amphiphiles for Liposome-Mediated DNA Transfection," Biochem. Internatl. <u>22</u> (2):235-241
57	Kalderon et al. (1984), "A Short Amino Acid Sequence Able to Specify Nuclear Location," Cell <u>39</u> :499-509
58	Kamata, H. et al. (1994), "Amphiphilic peptides enhance the efficiency of liposome-mediated DNA transfection," Nucl. Acids Res. <u>22</u> (3):536-537
59	Kaneda et al. (1989), "Introduction and Expression of the Human Insulin Gene in Adult Rat Liver," J. Biol. Chem. <u>264</u> (21):12126-12129
60	Kaneda et al. (1987), "The Improved Efficient Method for Introducing Macromolecules into Cells Using HVJ (Sendai virus) Liposomes with Gangliosides," Exp. Cell Res. <u>173</u> :56-69
61	Kielian, J. and Helenius, A. (1986), "Entry of Alphaviruses," in <u>The Togaviridae and Flaviviridae</u> , Schlesinger & Schlesinger (eds.), Plenum Press, N.Y., pp. 91-119
62	Kirsch, T. et al. (1996), "Cloning, High-Yield Expression in <i>Escherichia coli</i> , and Purification of Biologically Active HIV-1 Tat Protein," Protein Expr. Purif. <u>8</u> :75-84
63	Klappe, K. et al. (1986), "Parameters Affecting Fusion Between Sendai Virus and Liposomes. Role of Viral Proteins, Liposome Composition, and pH," Biochemistry <u>25</u> :8252-8260
64	Konopka, K. et al. (1991), "Enhancement of human immunodeficiency virus type 1 infection by cationic liposomes: the role of CD4, serum and liposome-cell interactions," J. Gen. Virol. <u>72</u> :2685-2696
65	Kraaijeveld, S.A. et al. (1984), "The Effect of liposomal charge on the neutralizing antibody response against inactivated encephalomyocarditis and Simiki Forest Viruses," Clin. Exp. Immunol. <u>56</u> :509-514
66	Kukowska-Latallo, J.F. et al. (1996), "Efficient transfer of genetic material into mammalian cells using Starburst polyamidoamine dendrimers," Proc. Natl. Acad. Sci. USA <u>93</u> :4897-4902
67	Lanford et al. (1986), "Induction of Nuclear Transport with a Synthetic Peptide Homologous to the SV40 T Antigen Transport Signal," Cell <u>46</u> :575-582

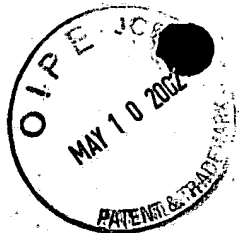


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Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

69	Lapidot et al. (1990), "Fusion-Mediated Microinjection of Liposome-Enclosed DNA into Cultured Cells with the Aid of Influenza Virus Glycoproteins," Exp. Cell Res. <u>189</u> :241-246
69	Lawler, J. et al. (1988), "Cell Attachment to Thrombospondin: The Role of ARG-GLY-ASP, Calcium, and Integrin Receptors," J. Cell Biol. <u>107</u> :2351-2361.
70	Life Technologies Catalog, (1993) 10 pp.
71	Liljstrom, P. and Garoff, H. (1991), "A New Generation of Animal Cell Expression Vectors Based on the Semliki Forest Virus Replicon," Biotech. <u>9</u> :1356-1361
72	Mann, D.A. and Frankel, A.D. (1991), "Endocytosis and targeting of exogenous HIV-1 Tat protein," EMBO J. <u>10</u> (7):1733-1739
73	Marsh et al. (1983), "Interactions of Simiki Forest Virus Spike Glycoprotein Rosettes and Vesicles with Cultured Cells," J. Cell Biol. <u>96</u> :455-461
74	Mason, P.W. et al. (1994), "RGD sequence of foot-and-mouth disease virus is essential for infecting cells via the natural receptor but can be bypassed by an antibody-dependent enhancement pathway," Proc. Natl. Acad. Sci. USA <u>91</u> :1932-1936.
75	Miyanochara, A. et al. (1998), "Partial Cell-Free Assembly of VSV-G Pseudotyped Retrovirus Particles," Molecular and Cellular Biology of Gene Therapy Symposium, Keystone, Colorado, January 19-25, 1998, #007, p. 34
76	Murata et al. (1991), "Modification of the N-Terminus of Membrane Fusion-Active Peptides Blocks the Fusion Activity," Biochem. Biophys. Res. Commun. <u>179</u> (2):1050-1055
77	Neugebauer, J. (1990), "Detergents: An Overview," Meth. Enzymol. <u>182</u> :239-253
78	Otero, M.J. and Carrasco, L. (1987), "Proteins are Cointernalized with Virion Particles during Early Infection," J. Virol. <u>160</u> :75-80
79	Pastan, I.H. and Willingham, M.C. (1981), "Journey to the Center of the Cell: Role of the Receptosome," Science <u>214</u> :504-509
80	Pepinsky, R.B. et al. (1994), "Specific Inhibition of a Human Papillomavirus E2 Trans-Activator by Intracellular Delivery of Its Repressor," DNA and Cell Biology <u>13</u> (10), Mary Ann Liebert, Inc., Publishers, pp. 1011-1019
81	Phalen et al. (1991), "Cholesterol is Required for Infection by Semliki Forest Virus," J. Cell Biol. <u>112</u> (4):615-623



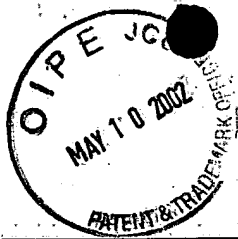


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Form PTO 1449		
ATTY DOCKET NO: 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

82	Pierschbacher, M.D. and Ruoslahti, E. (1987), "Influence of Stereochemistry of the Sequence Arg-Gly-Asp-Xaa on Binding Specificity in Cell Adhesion," J. Biol. Chem. <u>262</u> (36):17294-17298.
83	Pierschbacher, M.D. and Ruoslahti, E. (1984), "Cell attachment activity of fibronectin can be duplicated by small synthetic fragments of the molecule," Nature <u>309</u> :30-33.
84	Pinnaduwa, P. et al. (1989), "Use of a quaternary ammonium detergent in liposome mediated DNA transfection of mouse L-cells," Biochim. Biophys. Acta <u>985</u> :33-37
85	Promega Catalog, p. 251
86	Remy et al. (1995), "Targeted gene transfer into hepatoma cells with lipopolyamine-condensed DNA particles presenting galactose ligands: A stage toward artificial viruses," Proc. Natl. Acad. Sci. USA <u>92</u> :1744-1748
87	Rihs, H.-P. et al. (1991), "The rate of nuclear cytoplasmic protein transport is determined by the casein kinase II site flanking the nuclear localization sequence of the SV40 T-antigen," EMBO J. <u>10</u> (3):633-639
88	Rihs, H.-P. and Peters, R. (1989), "Nuclear transport kinetics depend on phosphorylation-site-containing sequences flanking the karyophilic signal of the Simian-virus 40 T-antigen," EMBO J. <u>8</u> (5):1479-1484
89	Rose, J.K. et al. (1991), "A New Cationic Liposome Reagent Mediating Nearly Quantitative Transfection of Animal Cells," BioTechniques <u>10</u> (4):520-525
90	Rosenthal, A.F. and Geyer, R.P. (1960), "A Synthetic Inhibitor of Venom Lecithinase A," J. Biol. Chem. <u>235</u> (8):2202-2206
91	Ruoslahti, E. and Pierschbacher, M.D. (1987), "New Perspectives in Cell Adhesion: RGD and Integrins," Science <u>238</u> :491-497.
92	Sands, J.A. (1986), "Virucidal Activity of Cetyltrimethylammonium Bromide Below the Critical Micelle Concentration," FEMS Microbiol. Lett. <u>36</u> :261-263
93	Scheule (1986), "Novel Preparation of Functional Sindbis Virosomes," Biochemistry <u>25</u> :4223-4232
94	Schlegel, R. et al. (1983), "Inhibition of VSV Binding and Infectivity by Phosphatidylserine: Is Phosphatidylserine a VSV-Binding Site?" Cell <u>32</u> :639-646
95	Schlegel, R. and Wade, M. (1985), "Biologically Active Peptides of the Vesicular Stomatitis Virus Glycoprotein," J. Virol. <u>53</u> (1):319-323



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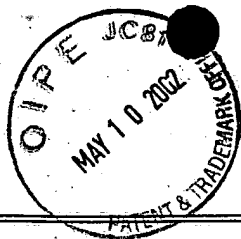
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Form PTO 1449.		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

96	Seth, et al., "Pathway of Adenovirus Entry into Cells," (1986) in <u>Virus Attachment and Entry into Cells</u> , Crowell, R.L. and Lonberg-Holm, K. (eds.), Am. Soc. Microbiology, Washington, pp. 191-195
97	Stegmann, T. et al. (1989), "Protein-mediated membrane fusion," Ann. Rev. Biophys. Biophys. Chem. <u>18</u> :187-211.
98	Suzuki, S. et al. (1985), "Complete amino acid sequence of human vitronectin deduced from cDNA. Similarity of cell attachment sites in vitronectin and fibronectin," EMBO J. <u>4</u> (10):2519-2524.
99	Tang, M.X. et al. (1996), "In Vitro Gene Delivery by Degraded Polyamidoamine Dendrimers," Bioconjugate Chem. <u>7</u> :703-714
100	Tikhonenko, T. et al. (1988), "Transfer of condensed viral DNA into eukaryotic cells using proteoliposomes," Gene <u>63</u> :321-330
101	"Transfection Reagent," Genet. Eng. News (15 June 1993), P. 12, column 4
102	Väänänen et al., (1980), "Fusion and Haemolysis of Erythrocytes Caused by Three Togaviruses: Semliki Forest, Sindbis, and Rubella," J. Gen. Virology <u>46</u> :467-475
103	Vives, E. et al. (1997), "A Truncated HIV-1 Tat Protein Basic Domain Rapidly Translocates through the Plasma Membrane and Accumulates in the Cell Nucleus," J. Biol Chem. <u>272</u> (25):16010-16017.
104	Wagner, E. et al. (1992), "Coupling of adenovirus to transferrin-polylysine/DNA complexes greatly enhances receptor-mediated gene delivery and expression of transfected genes," Proc. Natl. Acad. Sci. USA <u>89</u> :6099-6103
105	Wagner, E. et al. (1992), "Influenza virus hemagglutinin HA-2 N-terminal fusogenic peptides augment gene transfer by transferrin-polylysine-DNA complexes: Toward a synthetic virus-like gene-transfer vehicle," Proc. Natl. Acad. Sci. USA <u>89</u> :7934-7938
106	Walker et al. (1992), "Cationic lipids direct a viral glycoprotein into the class I major histocompatibility complex antigen-presentation pathway," Proc. Natl. Acad. Sci. USA <u>89</u> :7915-7918
107	Wayner, E.A. et al. (1989), "Identification and Characterization of the T Lymphocyte Adhesion Receptor for an Alternative Cell Attachment Domain (CS-1) in Plasma Fibronectin," J. Cell Biol. <u>102</u> :1321-1330.
108	Wickham, T.J. et al. (1995), "Targeting of adenovirus penton base to new receptors through replacement of its RGD motif with other receptor-specific peptide motifs," Gene Therapy <u>2</u> :750-756.
109	Yoshimura et al. (1993), "Adenovirus-mediated Augmentation of Cell Transfection with Unmodified Plasmid Vectors," J. Biol. Chem. <u>268</u> :2300



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MAY 15 2002

TECH CENTER 1600/2900

9 of 14

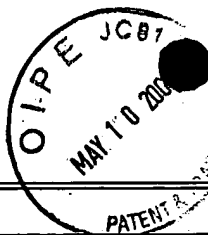
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		//0	Young et al. (1983), "Interaction of Enveloped Viruses with Planar Bilayer Membranes: Observations on Sendai, Influenza, Vesicular Stomatitis, and Simiki Forest Viruses," Virology <u>128</u> :186-194
		je1	Zhou, X. et al. (1991), "Lipophilic polylysines mediate efficient DNA transfection in mammalian cells," Biochim. Biophys. Acta <u>1065</u> :8-14
		112	Zhou, X. and Huang, L. (1994), "DNA transfection mediated by cationic liposomes containing lipopolylysine: characterization and mechanism of action," Biochim. Biophys. Acta <u>1189</u> :195-203.

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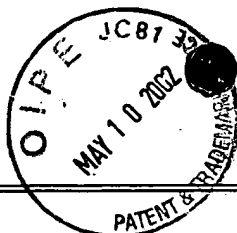
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## U.S. PATENT DOCUMENTS

Exmr. Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	5,906,922	05/25/99	Whittaker et al.	435	69.1	
	5,854,224	12/29/98	Lockett et al.	514	44	
	5,837,533	11/17/98	Boutin	435	320.1	
	5,773,527	06/30/98	Tomalia et al.	525	417	
	5,759,805	06/02/98	Feldhaus et al.	435	69.1	
	5,736,387	04/07/98	Paul et al.	435	320.1	
	5,670,347	09/23/97	Gopal	435	172.1	
	5,661,025	08/26/97	Szoka, Jr. et al.	435	172.3	
	5,658,776	08/19/97	Flotte et al.	435	172.3	
	5,631,329	05/20/97	Yin et al.	525	417	
	5,583,198	12/10/96	Whittaker	530	345	
	5,547,932	08/20/96	Curiel et al.	435	65	

## FOREIGN PATENT DOCUMENTS

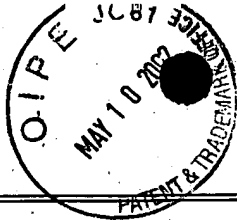
	Document Number	Date	Country	Class	Subclass	Translation Yes/No
113	WO 96/15811	05/30/96	PCT			
114	WO 87/02061	09.04.87	PCT	C12P	21/00	
115	WO 90/09786	07.09.90	PCT	A61K	31/00	
116	WO 92/22635	23.12.92	PCT	A61K	47/48	
117	WO 91/07947	13.06.91	PCT	A61K	9/08	
118	0 359 347 B1	14.08.89	EP	A61K	47/42	
119	WO 92/21752	10.12.92	PCT	A61K	35/20	
120	WO 93/05162	18.03.93	PCT	C12N	15/63	
121	WO 91/04753	18.04.91	PCT	A61K	47/48	



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**OTHER PRIOR ART** (including Author, Title, Date, Pertinent Pages, etc.)

	127	Behr, J.-P., "Synthetic Gene-Transfer Vectors," (1993) <i>Accounts of Chemical Research</i> 26:274-278
	129	Caminati, G. et al., "Photophysical Investigation of Starburst Dendrimers and Their Interactions with Anionic and Cationic Surfactants," (1990) <i>J. Am. Chem. Soc.</i> 112:8515-8522
	124	Citovsky, V. et al., "Nuclear localization of <i>agrobacterium</i> VirE2 protein in plant cells," (1992) <i>Science</i> 256:1802
	125	Cotten, M. et al., "Transferrin-polycation-mediated introduction of DNA into human leukemic cells: Stimulation by agents that affect the survival of transfected DNA or modulate transferrin receptor levels," (1990) <i>Proc. Natl. Acad. Sci.</i> 87:4033-4037
	124	Curiel, D.T. et al., "Gene transfer to respiratory epithelial cells via the receptor-mediated endocytosis pathway," (1992) <i>Am. J. Respir. Cell. Mol. Biol.</i> 6:247-252
	127	Demeneix, B.A. et al., "Gene transfer into intact vertebrate embryos," (1991) <i>Int. J. Dev. Biol.</i> 35:481-484
	128	Dingwall et al., "Human Immunodeficiency virus 1 tat protein binds trans-activation-responsive region (TAR) RNA in vitro," <i>Proc. Natl. Acad. Sci. USA</i> 86:6925-6929
	129	Dwarki, V.J., "Cationic liposome-mediated RNA transfection," (1993) <i>Methods in Enzymology</i> 217:644-654
	130	Finlay, D.R. et al., "Nuclear transport <i>in vitro</i> ," (1989) <i>J. Cell Sci. Suppl.</i> 11 p. 225-242
	131	Gao, X and Huang, L., "A novel cationic liposome reagent for efficient transfection of mammalian cells," (1991) <i>Biochem. and Biophys. Res. Communications</i> 179(1):280-285
	132	Garcia-Bustos, J. et al., "Nuclear protein localization," (1991) <i>Biochimica et Biophysica Acta</i> 1071:83-101
	133	Goldfarb, D.S. et al., "Synthetic peptides as nuclear localization signals," (1986) <i>Nature</i> 322:641-644
	134	Goldfarb, D.S. and Michaud, N., "Pathways for the nuclear transport of proteins and RNAs," (1991) <i>Trends in Cell Biology</i> 1:20-24
	135	Harbottle, R. et al. (1995), "RGD-mediated gene delivery and expression in epithelial cells," Keystone Symposium on Gene Therapy and Molecular Medicine, Steamboat Springs, CO, March 26 - April 1, 1995, Abstract No. C6-321
	136	Huckett, B. et al., "Evidence for targeted gene transfer by receptor-mediated endocytosis," (1990) <i>Biochem. Pharmacology</i> 40(2):253-263
	137	Kaneda, Y. et al., "Increased expression of DNA cointroduced with nuclear protein in adult rat liver," (1989) <i>Science</i> 243:375-378



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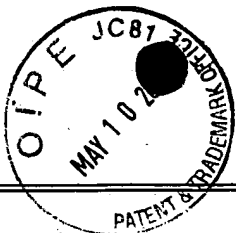
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ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

138	Karlsson, S. et al., "Transfer of genes into hematopoietic cells using recombinant DNA viruses," (1985) <i>Proc. Natl. Acad. Sci. USA</i> 82:158-162
139	Lanford, R.E. et al., "Comparison of diverse transport signals in synthetic peptide-induced nuclear transport," (1990) <i>Exp. Cell Res.</i> 186:32-38
146	Ledley, F.D., "Clinical considerations in the design of protocols for somatic gene therapy," (1991) <i>Human Gene Therapy</i> 2:77-83
141	Legendre, J.-Y. and Szoka, F.C., Jr., "Delivery of plasmid DNA into mammalian cell lines using pH-sensitive liposomes: Comparison with cationic liposomes," (1992) <i>Pharm. Res.</i> 9(10):1235-1242
142	Legendre, J.-Y. and Szoka, F.C., Jr., "Cyclic amphipathic peptide-DNA complexes mediate high-efficiency transfection of adherent mammalian cells," (1993) <i>Proc. Natl. Acad. Sci. USA</i> 90:893-897
143	Loyter, A. et al., "Mechanisms of DNA uptake by mammalian cells: Fate of exogenously added DNA monitored by the use of fluorescent dyes," (1982) <i>Proc. Natl. Acad. Sci. USA</i> 79:422-426
144	Malone, R.W. et al., "Cationic liposome-mediated RNA transfection," (1989) <i>Proc. Natl. Acad. Sci. USA</i> 86:6077-6081
145	Parente, R.A. et al., "Association of a pH-sensitive peptide with membrane vesicles: Role of amino acid sequence," (1990) <i>Biochemistry</i> 29:8713-8719
146	Parente, R.A. et al., "Mechanism of leakage of phospholipid vesicle contents induced by the peptide GALA," (1990) <i>Biochemistry</i> 29:8720-8728
147	Poste, G. et al., "Lipid vesicles as carriers for introducing biologically active materials into cells," (1976) <i>Methods in Cell Biology</i> 14:33-71
148	Rosenkranz, A.A. et al., "Receptor-mediated endocytosis and nuclear transport of a transfecting DNA construct," (1992) <i>Exp. Cell Res.</i> 199:323-329
149	Schmid, N. and Behr, J.-P., "Location of spermine and other polyamines on DNA as revealed by photoaffinity cleavage with polyaminobenzenediazonium salts," (1991) <i>Biochemistry</i> 30:4357-4361
150	Silver, P.A., "How proteins enter the nucleus," (1991) <i>Cell</i> 64:489-497
151	Smull, C.E. and Ludwig, E.H., "Enhancement of the plaque-forming capacity of poliovirus ribonucleic acid with basic proteins," (1962) <i>J. Bacteriology</i> 84:1035-1040
152	Sugawa, H. et al., "Large macromolecules can be introduced into cultured mammalian cells using erythrocyte membrane vesicles," (1985) <i>Exp. Cell Res.</i> 159:410-418



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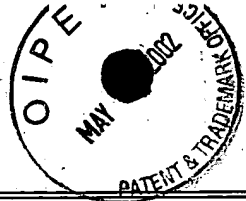
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APPLICANT Hawley-Nelson et al.		GROUP 1643

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153	Trubetskoy, V.S. et al., "Use of N-terminal modified poly (L-lysine)-antibody conjugate as a carrier for targeted gene delivery in mouse lung endothelial cells," (1992) <i>Bioconjugate Chem.</i> 3:323-327
154	van Zee, K. et al., "A hydrophobic protein sequence can override a nuclear localization signal independently of protein context," (1991) <i>Mol. and Cellular Biol.</i> 11(10):5137-5146
155	Wagner, E. et al., "DNA-binding transferrin conjugates as functional gene-delivery agents: Synthesis by linkage of polylysine or ethidium homodimer to the transferrin carbohydrate moiety," (1991) <i>Bioconjugate Chem.</i> 2:226-231
156	Wagner, E. et al., "Transferrin-polycation conjugates as carriers for DNA uptake into cells," (1990) <i>Proc. Natl. Acad. Sci. USA</i> 87:3410-3414
157	Wilson, J.M. et al., "Hepatocyte-directed gene transfer <i>in vivo</i> leads to transient improvement of hypercholesterolemia in low density lipoprotein receptor-deficient rabbits," (1992) <i>J. Biol. Chem.</i> 267(2):963-967
158	Wolff, J.A. et al., "Direct gene transfer into mouse muscle <i>in vivo</i> ," (1990) <i>Science</i> 247:1465-1468
159	Wu, C.H. et al., "Targeting genes: Delivery and persistent expression of a foreign gene driven by mammalian regulatory elements <i>in vivo</i> ," (1989) <i>J. Biol. Chem.</i> 265(29):16985-16987
160	Wu, G.Y. et al., "Receptor-mediated gene delivery <i>in vivo</i> : Partial correction of genetic analbuminemia in nagase rats," (1991) <i>J. Biol. Chem.</i> 266(22):14338-14342
161	Wu, G.Y. and Wu, C.H., "Receptor-mediated gene delivery and expression <i>in vivo</i> ," (1988) <i>J. Biol. Chem.</i> 263(29):14621-14624
162	Wu, G.Y. and Wu, C.H., "Evidence for targeted gene delivery to Hep G2 hepatoma cells <i>in vitro</i> ," (1988) <i>Biochemistry</i> 27:887-892
163	Yagi, K. et al., "Incorporation of histone into liposomes increases the efficiency of liposome-mediated gene transfer," (1991) <i>J. Clin. Biochem. Nutr.</i> 10:21-25
164	Zenke, M. et al., "Receptor-mediated endocytosis of transferrin-polycation conjugates: An efficient way to introduce DNA into hematopoietic cells," (1990) <i>Proc. Natl. Acad. Sci. USA</i> 87:3655-3659



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Form PTO 1449		
ATTY DOCKET NO. 32-95D	SERIAL NO. 09/911,569	FILING DATE July 23, 2001
APPLICANT Hawley-Nelson et al.		GROUP 1643

		165	Zhu, Z. et al., "Transformation of tobacco protoplasts with DNA entrapped in pH-sensitive liposomes," (1990) <i>Plant Cell Tissue and Organ Culture</i> 22:135-145
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EXAMINER	DATE CONSIDERED
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